

REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application.

Claims 1-18 are now present in this application. Claim 1 is independent.

Amendments have been made to the specification, and claim 1 has been amended. Reconsideration of this application, as amended, is respectfully requested.

Drawings

A drawing correction authorization request (DCAR) is being submitted concurrently herewith to delete reference sign 74 from Fig. 3.

Objection to the Specification

The Examiner has objected to the Specification because reference signs 60 and 74 are shown in Fig.3 and not mentioned in the description. In response to the Examiner's objection, reference sign 74 has been deleted from Fig. 3 (see DCAR) and the specification has been amended to include reference sign 60. Reconsideration and withdrawal of this objection are respectfully requested.

Examiner's Interview

Applicants conducted an interview with the Examiner on September 20, 2002 to discuss the Examiner's claim rejections. The Examiner's position is that some light is reflected to the rear (purposefully or not) in the prior art device of Figs. 1 and 2 (disclosed by the Applicants) and in Oyama. The Examiner agreed that amending claim 1 to add the term substantially is sufficient to overcome the applied references and indicated the after-final

amendment would be given full consideration. However, the Examiner indicated that an Advisory Action is possible. Applicants have amended independent claim 1 in accordance with the Examiner's suggestion.

Rejections under 35 U.S.C. § 103

Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Prior Art. This rejection is respectfully traversed.

The Prior Art discloses a light input 20 and a lamp housing 24, having a lamp 22, contained therein. The light input 22 does not direct the path of a light beam to the rear at a time prior to directing the path of a light beam to the front, and toward light guide 4. Rather, light input 20 directs light onto light guide 4 directly. The Examiner has asserted that the device of the prior art may direct some light to the rear, and suggested that Applicants amend claim 1 to add the term substantially (see Examiner's Interview above). Applicants have amended claim 1 in accordance with the Examiner's suggestion.

Therefore, Applicants respectfully submit that the Prior Art does not disclose or suggest a light input for directing a light path of a light beam substantially to the rear side thereof and away from the light guide prior to directing said light path to a front side thereof and toward the light guide, as recited in independent claim 1, as amended.

Claim 2 depends on claim 1. Since the Prior Art fails to disclose or suggest the features of independent claim 1, it cannot render claims 1 and 2 obvious to one of ordinary skill in the art. Reconsideration and withdrawal of this art grounds of rejection are respectfully requested.

Claims 1-5, and 7 stand rejected under 35 U.S.C. 103(a) over the Prior Art in view of U.S. Patent No. 5,808,708 to Oyama et al. (Oyama). This rejection is respectfully traversed.

Oyama discloses a light guide plate (4), the ends thereof forming semicircles (see Oyama, Fig. 2, and Col. 5, lines 62-63). Light guide 4 has bent end portion 4b, referred to as the non-corresponding section (see Oyama, Col. 6, lines 2-5). This portion of light guide 4 has a light incidence end 4C at the same level as, and receiving light directly and instantaneously from light source 3 (see Oyama, Figs. 1-6 etc). The Examiner has asserted that the device of Oyama may direct some light to the rear, and suggested that Applicants amend claim 1 to add the term substantially (see Examiner's Interview above). Applicants have amended claim 1 in accordance with the Examiner's suggestion.

Therefore Oyama does not disclose or suggest a light input for directing a light path of a light beam substantially to the rear side thereof and away from the light guide prior to directing said light path to a front side thereof and toward the light guide to obtain high focusing of the light beam, wherein all portions of the light guide are installed at a height different from a height of the light input, as recited in independent claim 1, as amended.

Claims 2-5 and 7 depend on claim 1. Since Oyama, like the prior art, fails to disclose or suggest the features of independent claim 1, the prior art in view of Oyama cannot render claims 2-5 and 7 obvious to one of ordinary skill in the art. Reconsideration and withdrawal of this art grounds of rejection is respectfully requested.

Claims 8, 11, 13, and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior Art, in view of Oyama, as applied to claim 2, and further in view of U.S. Patent No. 5,808,713 to Broer et al.

Oyama and the Prior Art, argued above with respect to independent claim 1, fails to disclose or suggest a lamp housing having a reflective plate provided at an inner side thereof to direct a light path of the light beam generated from the lamp substantially into the rear side thereof before directing the light beam

toward the light guide, as recited in claim 1. Broer, directed to a reflective polarizer, cannot fill this vacancy.

Claims 8, 11, 13, 14 (and claim 2) depend, either directly or indirectly, from independent claim 1. Since neither the Prior Art, nor Oyama, nor Broer, discloses or suggests the features of independent claim 1, the Prior Art, in view of Oyama, as applied to claim 2, and further in view of Broer, cannot render claims 8, 11, 13, and 14 obvious to one of ordinary skill in the art. Reconsideration and withdrawal of this art grounds of rejection are respectfully requested.

Allowable Subject Matter

The Examiner states that claims 6, 9, 10, 12 and 17 contain allowable subject matter, and would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims.

Applicants thanks the Examiner for the early indication of allowable subject matter in this application.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Percy L. Square, Registration No. 51,084, at (703) 205-8034, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachments: Version with Markings to Show Changes Made

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

The paragraph beginning on page 6, line 11, has been amended as follows:

--Referring to Fig. 3, there is shown a back light unit according to an embodiment of the present invention. The back light unit includes a light input 30 directing a light path of a light beam into the rear side thereof to achieve high focusing of the light beam, and a light-guide plate 40 for progressing the light beam from the light input 30 in the vertical direction of a liquid crystal panel. The light input 30 directs a light path of a light beam into the rear side to narrow a range of an incidence angle in the vertical direction of a light beam incident to the light-guide plate 40, thereby achieving high focusing of the light beam. A reflective plate 60 is additionally installed below the light-guide plate 40 and reflects a light beam progressing downwardly from the light guide plate 40 toward the liquid crystal panel.

In the Claims:

The claims have been amended as follows:

1. (Twice Amended) A back light unit in a liquid crystal display, comprising:

a light guide; and

a light input for directing a light path of a light beam substantially to the rear side thereof and away from the light guide prior to directing said light path to a front side thereof and toward the light guide to obtain high focusing of the light beam,

wherein all portions of the light guide are installed at a height different from a height of the light input.



FIG.3

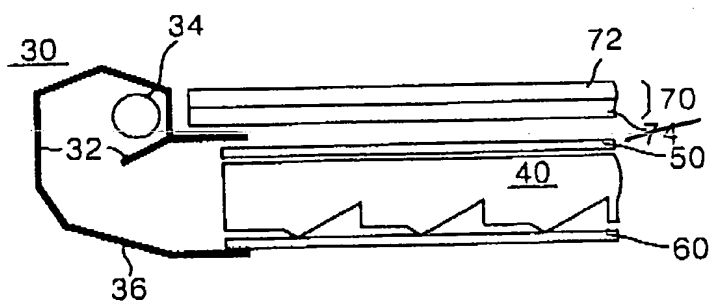


FIG.4

